

Title (en)

STRAINS OF THE GENUS PANTOEAE SPP. AND THE USE OF STRAINS OF THE GENUS PANTOEAE SPP. IN PLANT PROTECTION

Title (de)

STÄMME DER GATTUNG PANTOEAE SPP. VERWENDUNG VON STÄMMEN DER GATTUNG PANTOEAE SPP. IN-PLANT-SCHUTZ

Title (fr)

SOUCHES DU GENRE PANTOEAE SPP. UTILISATION DE SOUCHES DU GENRE PANTOEAE SPP. PROTECTION D'INSTALLATION

Publication

EP 4311856 A2 20240131 (EN)

Application

EP 23187343 A 20230724

Priority

PL 44183422 A 20220725

Abstract (en)

The subject of the invention is new strains Pantoea agglomerans T16/8 and Pantoea allii T14/15, deposited in the Polish Collection of Microorganisms PCM at the Institute of Immunology and Experimental Therapy of the Polish Academy of Sciences named after Ludwik Hirszfeld in Wroclaw. The subject of the invention is also the use of the new strains Pantoea agglomerans T16/8 or Pantoea allii T14/15 as agents for protecting vegetable, fruit, agricultural, and ornamental plants against fungal diseases such as white rot, gray mold, alternariosis, anthracnose, brown rot, bull's eye rot, powdery mildew and blue mold, as well as bacterial diseases such as fire blight, soft rot, affecting cultivated plants, both during the growing season and during the storage of crops. Strains Pantoea agglomerans T16/8 or Pantoea allii T14/15 are applied in the form of an aqueous suspension to the plant's surface, through spraying, soaking plants or their parts under storage conditions, under cover, and in field conditions, and the cell count of the strain in the suspension is at least 10⁷ CFU/ml.

IPC 8 full level

C12N 1/20 (2006.01); **A01N 63/20** (2020.01)

CPC (source: EP PL)

A01N 63/20 (2020.01 - EP PL); **A01P 1/00** (2021.08 - EP); **A01P 3/00** (2021.08 - EP PL); **C12N 1/205** (2021.05 - EP PL);
C12R 2001/01 (2021.05 - EP PL); **C12R 2001/18** (2021.05 - EP)

Citation (applicant)

- PL 418852 A1 20180326 - VORTEX ENERGY POLSKA SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA [PL]
- PL 238148 B1 20210712 - UNIV GDANSKI [PL]
- PL 236445 B1 20210111 - UNIV GDANSKI [PL]
- K. B. JOHNSONV. O. STOCKWELL: "Erwinia amylovora", vol. 58, 2000, PROGRESS IN PLANT PROTECTION, article "Biological control of fire blight. Fire blight: the disease and its causative agent", pages: 319 - 337
- S. V. BEERJ. R. RUNDLE: "Suppression of Erwinia amylovora by Erwinia herbicola in immature pear fruits", PHYTOPATHOLOGY, vol. 73, no. 9, 1983, pages 1346 - 1346
- S. V. BEER: "Control of fire blight by non-pathogenic bacteria", PHYTOPATHOLOGY, vol. 70, no. 5, 1980, pages 459 - 459
- C. A. ISHIMARU ET AL.: "Multiple antibiotic production by Erwinia herbicola", PHYTOPATHOLOGY, vol. 78, no. 6, 1988, pages 746 - 750
- C. L. BRADY ET AL.: "Pantoea vagans sp. nov., Pantoea eucalypti sp. nov., Pantoea deleyi sp. nov and Pantoea anthophila sp. nov", INT J SYST EVOL MICROBIOL, vol. 59, 2009, pages 2339 - 2345
- WEISBURG ET AL.: "16S ribosomal DNA amplification for phylogenetic study", JOURNAL OF BACTERIOLOGY, vol. 173, 1991, pages 697 - 703, XP000198171
- C. BRADY ET AL.: "Phylogeny and identification of Pantoea species associated with plants, humans and the natural environment based on multilocus sequence analysis (MLSA)", SYSTEMATIC AND APPLIED MICROBIOLOGY, vol. 31, no. 6-8, 2008, pages 447 - 460, DOI: 10.1016/j.syapm.2008.09.004
- L. DIANCOURT ET AL.: "Multilocus sequence typing of Klebsiella pneumoniae nosocomial isolates", J CLIN MICROBIOL, vol. 43, 2005, pages 4178 - 4182
- S.M. ALJANABI. MARTINEZ: "Universal and rapid salt-extraction of high quality genomic DNA for PCR-based techniques", NUCLEIC ACIDS RES, vol. 25, no. 22, 1997, pages 4692 - 3
- K.T. KONSTANTINIDIS ET AL.: "Toward a more robust assessment of intraspecies diversity, using fewer genetic markers", APPL. ENVIRON. MICROBIOL, vol. 72, 2006, pages 7286 - 7293
- M. RICHTERR. ROSSELLO-MORA: "Shifting the genomic gold standard for the prokaryotic species definition", PROC. NATL. ACAD. SCI. U. S. A., vol. 106, 2009, pages 19126 - 19131
- WEISBURG ET AL.: "16 S ribosomal DNA amplification for phylogenetic study", JOURNAL OF BACTERIOLOGY, vol. 173, 1991, pages 697 - 703, XP000198171
- KING, E.O.WARD, M.K.RANEY, D.E.: "Two simple media for the demonstration of pyocyanin and fluorescin", J. LAB. CLIN. MED, vol. 44, no. 2, 1954, pages 301 - 7, XP000672468
- MIKICIRISKI ASOBICZEWSKI P.PULAWSKA J.MACIOROWSKI R.: "Control of fire blight (Erwinia amylovora) by a novel strain 49M of Pseudomonas graminis from the phyllosphere of apple (Malus spp.)", EUR J PLANT PATHOL, vol. 145, 2016, pages 265 - 276

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4311856 A2 20240131; EP 4311856 A3 20240605; PL 245234 B1 20240603; PL 441834 A1 20240129

DOCDB simple family (application)

EP 23187343 A 20230724; PL 44183422 A 20220725